CLAIM AMENDMENTS

1-87 (canceled)

88. (new) A method of immunotherapy comprising administering to a patient in need thereof a combination of an alkaloid and a toll-like receptor ligand at a dose sufficient to induce IL-2 production in dendritic cells in the patient.

89. (new) The method of claim 88 wherein the immunotherapy comprises:

(a) increasing the Th1:Th2 response ratio;

(b) haemorestoration;

(c) haemoablative immunotherapy;

(d) the treatment of immunosuppression;

(e) treatment of proliferative disorders (e.g. cancer or cancer metastasis);

(f) vaccination, wherein the alkaloid acts as an adjuvant;

(g) vaccination, wherein the alkaloid acts to potentiate dendritic cells *in situ*;

(h) wound healing; or

(i) the treatment or prophylaxis of infection.

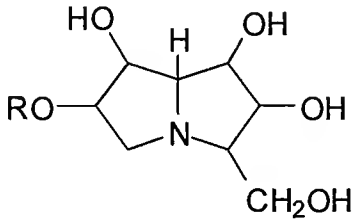
90. (new) The method of claim 88 wherein the alkaloid is a piperidine, pyrroline, pyrrolidine, pyrrolizidine, indolizidine or nortropane alkaloid.

91. (new) The method of claim 89 wherein the alkaloid is a piperidine, pyrroline, pyrrolidine, pyrrolizidine, indolizidine or nortropane alkaloid.

92. (new) The method of claim 88 wherein the alkaloid is polyhydroxylated.

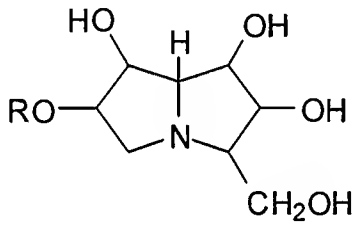
93. (new) The method of claim 89 wherein the alkaloid is polyhydroxylated.

94. (new) The method of claim 92 wherein the alkaloid has the formula:



wherein R is selected from the group comprising hydrogen, straight or branched, unsubstituted or substituted, saturated or unsaturated acyl, alkyl (e.g. cycloalkyl), alkenyl, alkynyl and aryl groups, or a pharmaceutically acceptable salt or derivative thereof.

95. (new) The method of claim 93 wherein the alkaloid has the formula:



wherein R is selected from the group comprising hydrogen, straight or branched, unsubstituted or substituted, saturated or unsaturated acyl, alkyl (e.g. cycloalkyl), alkenyl, alkynyl and aryl groups, or a pharmaceutically acceptable salt or derivative thereof.

96. (new) A live cell vaccine comprising an alkaloid and dendritic cells.

97. (new) The vaccine of claim 96 wherein the dendritic cells are antigen-pulsed dendritic cells.

98. (new) The vaccine of claim 96 further comprising T cells.

99. (new) The vaccine of claim 97 further comprising T cells.

100. (new) The vaccine of claim 98 wherein the T cells are primed by contact with dendritic cells.

101. (new) The vaccine of claim 99 wherein the T cells are primed by contact with dendritic cells.

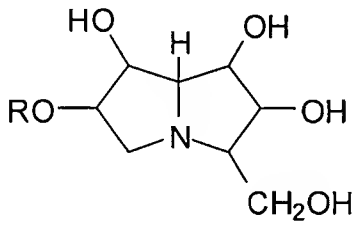
102. (new) The vaccine of claim 100 wherein the T cells are primed by contact with antigen-pulsed dendritic cells.

103. (new) The vaccine of claim 101 wherein the T cells are primed by contact with antigen-pulsed dendritic cells.

104. (new) The vaccine of claim 103 wherein the alkaloid is a piperidine, pyrroline, pyrrolidine, pyrrolizidine, indolizidine or nortropane alkaloid.

105. (new) The vaccine of claim 96 wherein the alkaloid is polyhydroxylated.

106. (new) The vaccine of claim 105 wherein the alkaloid has the formula:



wherein R is selected from the group comprising hydrogen, straight or branched, unsubstituted or substituted, saturated or unsaturated acyl, alkyl (e.g. cycloalkyl), alkenyl, alkynyl and aryl groups, or a pharmaceutically acceptable salt or derivative thereof.

107. (new) A vaccine comprising a neoantigen, an alkaloid and a toll-like receptor ligand.